STATE OF CALIFORNIA

EPIC TRIENNIAL INVESTMENT PLAN 2015-17
Proposed Energy Research Initiative Questionnaire

CALIFORNIA ENERGY COMMISSION

(This is a Request for Information only - Complete Pages 1 and 2 for each initiative)

Title of Proposed Initiative (Short and concise):

CalCEF Program: Demand-Driven Innovation and Incubator Coordination

Investment Areas (Check one or more) – *For definitions, see First Triennial Investment Plan, page 12*:

☐ Applied Research and Development

☐ Technology Demonstration and Deployment

X Market Facilitation

Electricity System Value Chain (**Check only one**): *See CPUC Decision 12-05-037, Ordering Paragraph 12.a. http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF.*

☐ Grid operations/market design

☐ Generation

☐ Transmission

☐ Distribution

☐ Demand-side management

Issues and Barriers:

Describe the issues and barriers that are impeding full market adoption of the proposed clean energy technology or strategy (such as cost, integration, or lack of information).

Initiative Description and Purpose:

How will this technology or strategy help address the issue/issues? Describe knowledge to be advanced to overcome critical barriers. Include the recommended funding level (minimum and maximum) for each project under this initiative.

Stakeholders:

Identify the stakeholders who support the initiative.

Background and the State-of-the-Art:

- What research development and demonstration has been done or is currently being done to advance this technology or strategy (cite past research as applicable)?
- Describe any public and/or private successes and failures the technology or strategy has encountered in its path through the energy innovation pipeline: lab-scale testing, pilot-scale testing, pre-commercial demonstration, commercial scale deployment, market research, workforce development.
- Identify other related programs and initiatives that deal with the proposed technology or strategy, such as state and federal programs or funding initiatives (DOE, ARPA-E, etc.).

Justification:

Describe how this technology or strategy will provide California IOU electric ratepayer benefits and provide any estimates of quantified annual savings/benefits in California, including:

- Name of sector and estimated size and energy use.
- Quantifiable performance improvements for the proposed technology/strategy.
- Maximum market potential, if successful.
- Number of direct jobs created in California.
- Why this research is appropriate for public funding.

Ratepayer Benefits (Check one or more)**:**

☐ Promote greater reliability

☐ Potential energy and cost savings

☐ Increased safety

☐ Societal benefits

☐ Environmental benefits - specify

☐ GHG emissions mitigation/adaptation in the electricity sector at the lowest possible cost

☐ Low emission vehicles/transportation

☐ Waste reduction

☐ Economic development

Describe specific benefits (qualitative and quantitative) of the proposed initiative

Public Utilities Code Sections 740.1 and 8360:

Please describe how this technology or strategy addresses the principles articulated in California Public Utilities Code Sections 740.1 and 8360. The California Public Utilities Code is available online at www.leginfo.ca.gov/cgi-bin/calawquery?codesection=puc.

Responsive to February 2014 Workshop Question #5:

"*To what extent do existing clean energy business incubators, business plan competitions, and innovation clusters support companies in scaling up to commercial production? What critical need would be addressed if EPIC funds were available to help startup companies gain access to these services? How can the Energy Commission through EPIC address critical needs related to facilitating partnerships to bring innovative clean energy technologies to market?"*

The California Clean Energy Fund (CalCEF) proposes the creation of a program to coordinate the state's clean energy incubators, the consumers of clean energy solutions, and the policy drivers stimulating innovation, in a framework of "**Demand-Driven Innovation**" (DDI). The DDI framework would be deployed via a capital-efficient, "meta-incubator" model that coordinates and finds efficiencies within the diffuse collection of clean energy incubators operating in California today.

At present the industry of clean technology incubation in California is poorly connected, insufficiently funded, and unreliably coordinated with either the public interest funding provided by the state or the potential follow-on financing available from private venture investors. Moreover, there exists no structured, statewide mechanism whereby the firms and industries in need of clean energy solutions can make those needs, and the associated procurement processes, known to entrepreneurs and their financial partners.

The proposed program would:

1) Provide a low-cost aggregation of existing incubator resources for California innovators and entrepreneurs, in the form of a single web portal and direct support to guide users through the process of engagement;
2) Convene a network of the consumers of clean energy solutions, building from the disaggregated networks built by the individual incubators throughout the state, in order to define and articulate their needs to the innovation environment;
3) In collaboration with the incubators on a statewide basis, deploy this intelligence regarding customer needs to provide structured business plan and market development counseling from the earliest stages of product development.
4) Interface with venture investors for the curation of follow-on investment opportunities on behalf of incubated companies.

The aim is to ensure that recipients of public funds are appropriately attuned to the customer needs and potential market implications of their nascent technologies and projects.

The result will be a better likelihood of market receptivity to the awarded technology or project, resulting in greater economic and environmental benefits to the state, and a more cost-effective allocation of EPIC funds in support of this Commission priority.